

CLAIMS

1. A multistatic acoustic system comprising at least:
  - an emitter base comprising means of emission of sonar pulses,
  - a receiver base comprising means of reception and of processing of sonar echoes,  
the emitter base also comprising means for transmitting mode information to the receiver base, characterized in that the mode information is transmitted to the receiver base in acoustic form by an appraisal pulse, said appraisal pulse being modulated by a signal containing said mode information.
- 15 2. The system as claimed in claim 1, characterized in that the two pulses are separated by a time interval  $\Delta t$  dependent on the mode of operation of the system and known to the receiver bases.
- 20 3. The system as claimed in claim 1, characterized in that the two pulses are separated by a time interval  $\Delta t$  whose duration is transmitted to the receiver bases with the mode information.
- 25 4. The system as claimed in one of claims 2 or 3, characterized in that,  $\Delta t$  being equal to zero, the two pulses are consecutive.
- 30 5. The system as claimed in one of the preceding claims, characterized in that the appraisal pulse and the sonar pulse are emitted by a single emitter successively emitting the two pulses.
- 35 6. The system as claimed in claim 1, characterized in that the modulation of the appraisal pulse by the modulating signal containing the mode information is a digital coding.

7. The system as claimed in claim 1, characterized in that the modulation of the appraisal pulse by the modulating signal containing the mode information is a phase-hopping coding.

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8. The system as claimed in claim 1, characterized in that the modulation of the appraisal pulse by the modulating signal containing the mode information is a frequency-hopping coding.

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9. The system as claimed in any one of the preceding claims, characterized in that the instant of emission of the sonar pulse is determined on the basis of the instant of reception of the appraisal pulse by the  
15 receiver bases and of the mode of operation.

10. The system as claimed in any one of claims 1 to 7, characterized in that the instant of emission of the sonar pulse is determined on the basis of the date of  
20 emission of said sonar pulse, contained in the mode message.

11. The system as claimed in any one of the preceding claims, characterized in that it comprises means for  
25 encrypting the mode information.

12. An application of the device according to the invention to the control of positioning of autonomous underwater craft.